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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,475	10/07/2005	Yvon Dutertre	324-179	2199
23429 7590 09/16/2009 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER NGUYEN, THUAN T				
ART UNIT		PAPER NUMBER		
2618				
MAIL DATE		DELIVERY MODE		
09/16/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/552,475

**Applicant(s)**

DUTERTRE ET AL.

**Examiner**

THUAN T. NGUYEN

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/88)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --  
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.*

2. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Kojima et al. (U.S. Patent No. 7,142,824 B2).

Regarding claim 1, Kojima teaches "a terminal equipment for a bidirectional radio link, said terminal equipment being adapted to emit and receive simultaneously and including: a first emitter adapted to emit a first data signal in a first useful frequency band and a first receiver adapted to receive a second data signal in said first useful frequency band, a second receiver adapted to receive a third data signal in a second useful frequency band via (a) a first antenna, (b) a first circulator, and c) a filter having a pass-band for passing said second useful frequency band, said first emitter being adapted to emit said first data signal in said first useful frequency band via a) a filter having a pass-band for passing said first useful frequency band, b) said first circulator, and c) said first antenna, and a second emitter adapted to emit a fourth data signal in said second useful frequency band via (a) a filter having a passband for passing said second useful frequency band, b) a second circulator, and c) a second antenna, said first receiver being adapted to receive the second data signal in said first useful frequency band via (a) said second antenna, b) said second circulator, and c) a filter having a pass-band for passing said first useful

frequency band", i.e., refer to all figures for alternative concepts of using two antennas for handling at least two different frequency bands using a transmitter and a receiver for each frequency band, and dual mode/multimode refers to handling different frequency bands:

**Brief Summary Text - BSTX (14):**

An antenna device of the present invention includes: a first antenna matching with first, second, and third frequency bands; a second antenna matching with the third frequency band; a diplexer for distributing signals received from the first antenna into signals of the first frequency band and signals of the second and third frequency bands; a first switch unit for selecting a first transmitter for transmitting signals of the first frequency band or a first receiver for receiving signals of the first frequency band and connecting the same to the diplexer; a second switch unit for selecting a second receiver for receiving signals of the second frequency band or a second transmitter for transmitting signals of the second frequency band and connecting the same to the diplexer; and a third switch unit for selecting the second antenna or diplexer and connecting the same to a transmitter/receiver for transmitting and receiving signals of the third frequency band.

**Brief Summary Text - BSTX (15):**

In the above-described construction, signals received from the first antenna matched with the first, second, and third frequency bands are distributed by the diplexer into signals of the first frequency band and signals of the second and third frequency bands. For signals of the first frequency band, the first switch unit selects the first receiver or first transmitter and connects the same to the diplexer. In addition, for signals of the second frequency band, the second switch unit selects the second receiver or second transmitter and connects the same to the diplexer. For signals of the third frequency band, the third switch unit selects the second antenna or diplexer and connects the same to the transmitter/receiver. Thereby, an antenna device which corresponds to two radio communications systems and three frequency bands, which can simultaneously carry out a reception and a transmission of different radio communications systems, and which is capable of using antenna diversity can be provided by a simple construction. Namely, two antenna systems corresponding to the three frequency bands composed of a dual-band single-mode antenna system of the first and second frequency bands and a single-mode antenna system of the third frequency band can be realized without making drastic modifications. In addition, a reception of signals of the first frequency band and a transmission of signals of the third frequency band can be simultaneously carried out. Furthermore, for signals of the third frequency band, an antenna device capable of using antenna diversity can be simply provided.

**Brief Summary Text - BSTX (17):**

According to the above-described construction, a dual-mode/multi-band antenna device corresponding to the three frequency bands which can use an external antenna in place of the first antenna can be provided.

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Lundby (in PTO 892 attached) disclose a system related to diversity transmission in a wireless communications system.

4. **Any response to this action should be mailed to:**  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to the New Central Fax number:**

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tony T. Nguyen/  
Primary Examiner  
Art Unit 2618